User´s Manual

DASnet Splitter

Antes de utilizar el equipo, lea la sección "Precauciones de seguridad" de este manual. Conserve este manual para futuras consultas.

Before operating the device, please read the "Safety precautions" section of this manual. Retain this manual for future reference.

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9 *aero 40A* + 6 *LX-218CA*

12 *aero 40A* + 9 *LX-218CA*

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DASnet cables

El signo de exclamación dentro de un triángulo indica la existencia de importantes instrucciones de operación y mantenimiento en la documentación que acompaña al producto. Conserve y lea todas estas instrucciones. Siga las advertencias.

The exclamation point inside an equilateral triangle is intended to alert the users to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.
Heed all warnings. Follow all instructions. Keep these instructions.

ATENCIÓN: Es un producto clase A, por lo que en entornos domésticos puede causar radio-interferencias, en cuyo caso el usuario tendrá que tomar las medidas oportunas.
De acuerdo con EN55103-2, usar el equipo sólo en entornos E1, E2, E3 ó E4.

WARNING: This is a class A product. In a domestic environment this product my cause radio interferences in which case the user may be required to take adequate measures.
Use this product only in E1, E2, E3 or E4 environments according to EN55103-2.

No desconecte la tierra en el conector de alimentación pues el peligroso e ilegal. Equipo de Clase I.

Do not remove mains connector ground, it is dangereous and illegal. Class I device.

El signo del rayo con la punta de flecha, alerta contra la presencia de voltajes peligrosos no aislados. Para reducir el riesgo de choque eléctrico, no retire la cubierta.
Sólo use este equipo con el cable de red de alimentación adecuado para su país.

The lightning and arrowhead symbol warns about the presence of uninsulated dangerous voltage. To reduce the risk of electric shock, do not remove the cover.
Only use this equipment with an appropriate mains cord for your country.

No instale el aparato cerca de ninguna fuente de calor como radiadores, estufas u otros aparatos que produzcan calor. Debe instalarse siempre sin bloquear la libre circulación de aire por las aletas del radiador.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
The circulation of air through the heatsink must not be blocked.

No exponga este equipo a la lluvia o humedad sin el protector de lluvia recomendado. No exponga el equipo a salpicaduras sin el protector de lluvia recomendado, ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas.

Do not expose this device to rain or moisture without the rain protector supplied. Do not place any objects containing liquids, such as bottles or glasses, on the top of the unit. Do not splash liquids on the unit without the rain protector supplied.

Este símbolo indica que el presente producto no puede ser tratado como residuo doméstico normal, sino que debe entregarse en el correspondiente punto de recogida de equipos eléctricos y electrónicos.

This symbol on the product indicates that this product should not be treated as household waste. Instead it shall be handed over to the appicable collection point for the recycling of electrical and electronic equipment.

Equipo diseñado para funcionar entre 15ºC y 45ºC con una humedad relativa máxima del 95%, con un rango de ±10% de la tensión nominal de alimentación indicada en la etiqueta trasera (según IEC 60065:2001). Si debe sustituir el fusible preste atención al tipo y rango.

Working temperature ranges from 15ºC to 45ºC with a relative humidity of 95%, with ±10% of the rated main voltage value indicated on the rear label (according to IEC 60065:2001). If the fuse needs to be replaced, please pay attention to correct type and ratings.

El cableado exterior conectado al equipo requiere de su instalación por una persona instruida o el uso de cables flexibles ya preparados.

The outer wiring connected to the device requires installation by an instructed person or the use of a flexible cable already prepared.

Si el aparato es conectado permanentemente, la instalación eléctrica del edificio debe incorporar un interruptor multipolar con separación de contacto de al menos 3mm en cada polo.

If the apparatus is connected permanently, the electrical system of the building must incorporate a multipolar switch with a separation of contact of at least 3mm in each pole.

Desconecte este aparato durante tormentas eléctricas, terremotos o cuando no se vaya a emplear durante largos periodos.

Unplug this apparatus during lightning storms, earthquakes or when unused for long periods of time.

No existen partes ajustables por el usuario en el interior de este equipo. Cualquier operación de mantenimiento o reparación debe ser realizada por personal cualificado. Es necesario el servicio técnico cuando el equipo se haya dañado de alguna forma, como que haya caído líquido o algún objeto en el interior del aparato, haya sido expuesto a lluvia o humedad, no funcione correctamente, haya recibido un golpe o su cable de red esté dañado.

No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

Limpie con un paño seco. No use limpiadores con disolventes.

Clean only with a dry cloth. Do not use any solvent based cleaners.

GARANTÍA

Todos nuestros productos están garantizados por un periodo de 24 meses desde la fecha de compra.

Las garantías sólo serán válidas si son por un defecto de fabricación y en ningún caso por un uso incorrecto del producto.

Las reparaciones en garantía pueden ser realizadas, exclusivamente, por el fabricante o el servicio de asistencia técnica autorizado.

Otros cargos como portes y seguros, son a cargo del comprador en todos los casos.

Para solicitar reparación en garantía es imprescindible que el producto no haya sido previamente manipulado e incluir una fotocopia de la factura de compra.

WARRANTY

All D.A.S. products are warrantied against any manufacturing defect for a period of 2 years from date of purchase.

The warranty excludes damage from incorrect use of the product.

All warranty repairs must be exclusively undertaken by the factory or any of its authorised service centers.

To claim a warranty repair, do not open or intend to repair the product.

Return the damaged unit, at shippers risk and freight prepaid, to the nearest service center with a copy of the purchase invoice.

DECLARACIÓN DE CONFORMIDAD
DECLARATION OF CONFORMITY

D.A.S. Audio, S.A.
C/ Islas Baleares, 24 - 46988 - Pol. Fuente del Jarro - Valencia. España (Spain).

Declara que ***DASnet Splitter***:
Declares that ***DASnet Splitter***:

Cumple con los objetivos esenciales de las Directivas:
Abide by essential objectives relating Directives:

- Directiva de Baja Tensión (Low Voltage Directive) 2006/95/CE
- Directiva de Compatibilidad Electromagnética (EMC) 2004/108/CE
- Directiva RoHS 2011/65/CE
- Directiva RAEE (WEEE) 2002/96/CE

Y es conforme a las siguientes Normas Armonizadas Europeas:
In accordance with Harmonized European Norms:

- EN 60065:2002/A11:2008
  Audio, video and similar electronic apparatus. Safety requirements.
- EN 55103-1:2009
  Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 1:Emission.
- EN 55103-2:2009
  Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2:Immunity.

INTRODUCTION

The *DASnet Splitter* is intended for the distribution of analog audio, monitoring data (*DASnet*) and power to multiple devices, with simplicity.

For more information about *DASnet*, typical configurations, *DASnet Rack*, or *DASnet cables* see our website www.dasaudio.com.

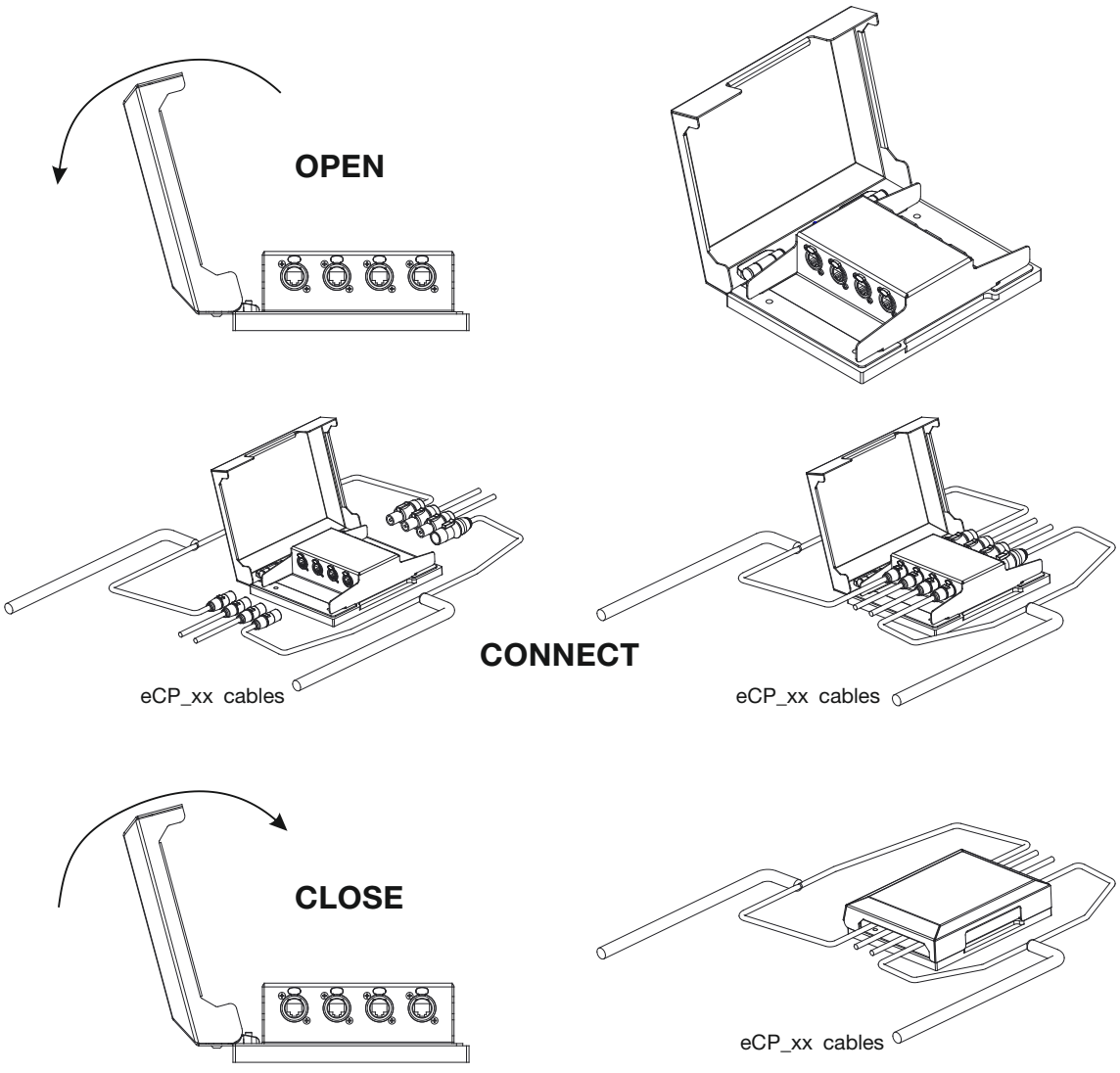
Features

The *DASnet Splitter* is a steel case intended for the distribution of analog audio, monitoring data (*DASnet*) and power to multiple devices (the maximum number of units will depend on the system´s current consumption).

It includes one power input by means of one powercon true 1 connector (black-yellow) and one analog audio plus monitoring data input by the use of an ethercon connector.

It includes three power outputs by means of three powercon NAC3MPB connectors (white) and three analog audio plus monitoring data outputs consisting of three ethercon connectors.

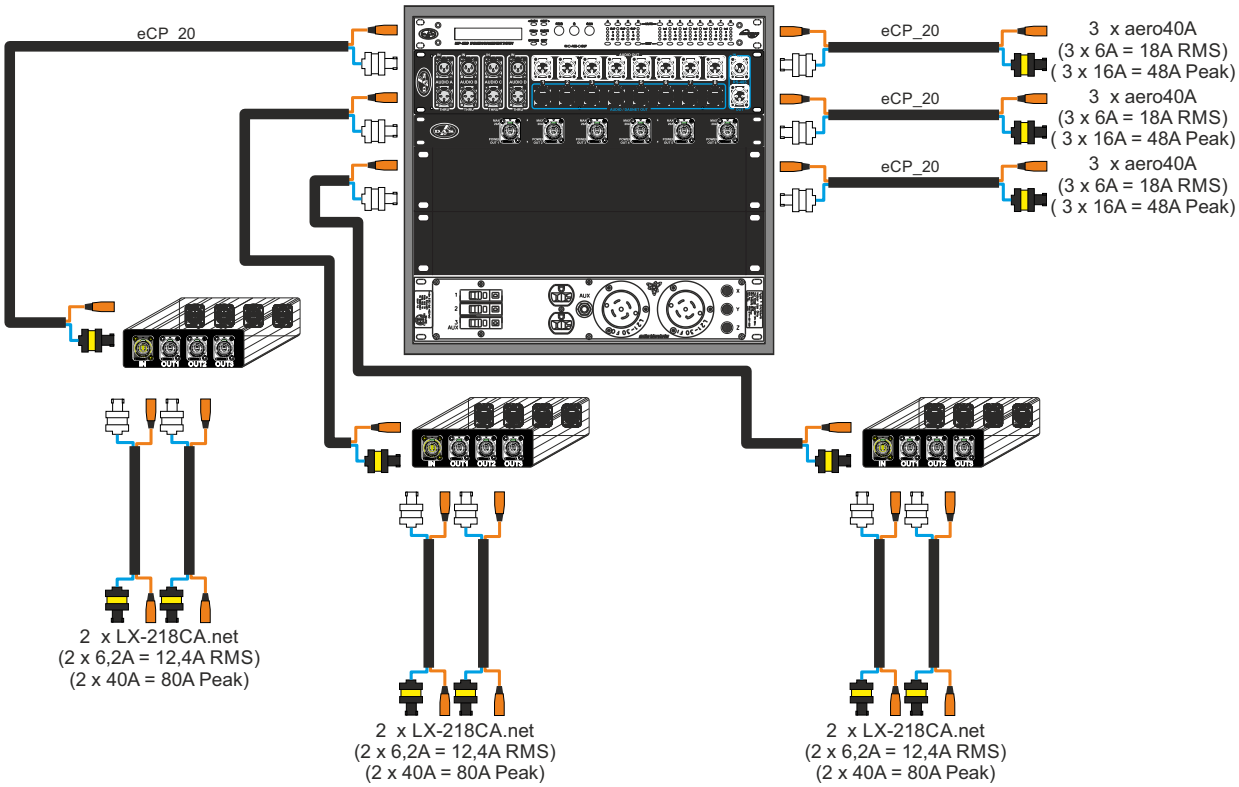
The main use of the splitter is with the *LX-218CA.net* subwoofers. As the audio is routed in parallel inside the splitter never combine different speaker models in a single *DASnet Splitter*.



CONFIGURATIONS

To continue, two configuration examples. You will find more on the web page.

115V DASnet RACK: maximum number of cabinets - 9 aero40A + 6 LX-218CA.net


eCP_20
eCP_20
3 x aero40A
(3 x 6A = 18A RMS)
(3 x 16A = 48A Peak)
eCP_20
3 x aero40A
(3 x 6A = 18A RMS)
(3 x 16A = 48A Peak)
eCP_20
3 x aero40A
(3 x 6A = 18A RMS)
(3 x 16A = 48A Peak)
2 x LX-218CA.net
(2 x 6,2A = 12,4A RMS)
(2 x 40A = 80A Peak)
2 x LX-218CA.net
(2 x 6,2A = 12,4A RMS)
(2 x 40A = 80A Peak)
2 x LX-218CA.net
(2 x 6,2A = 12,4A RMS)
(2 x 40A = 80A Peak)

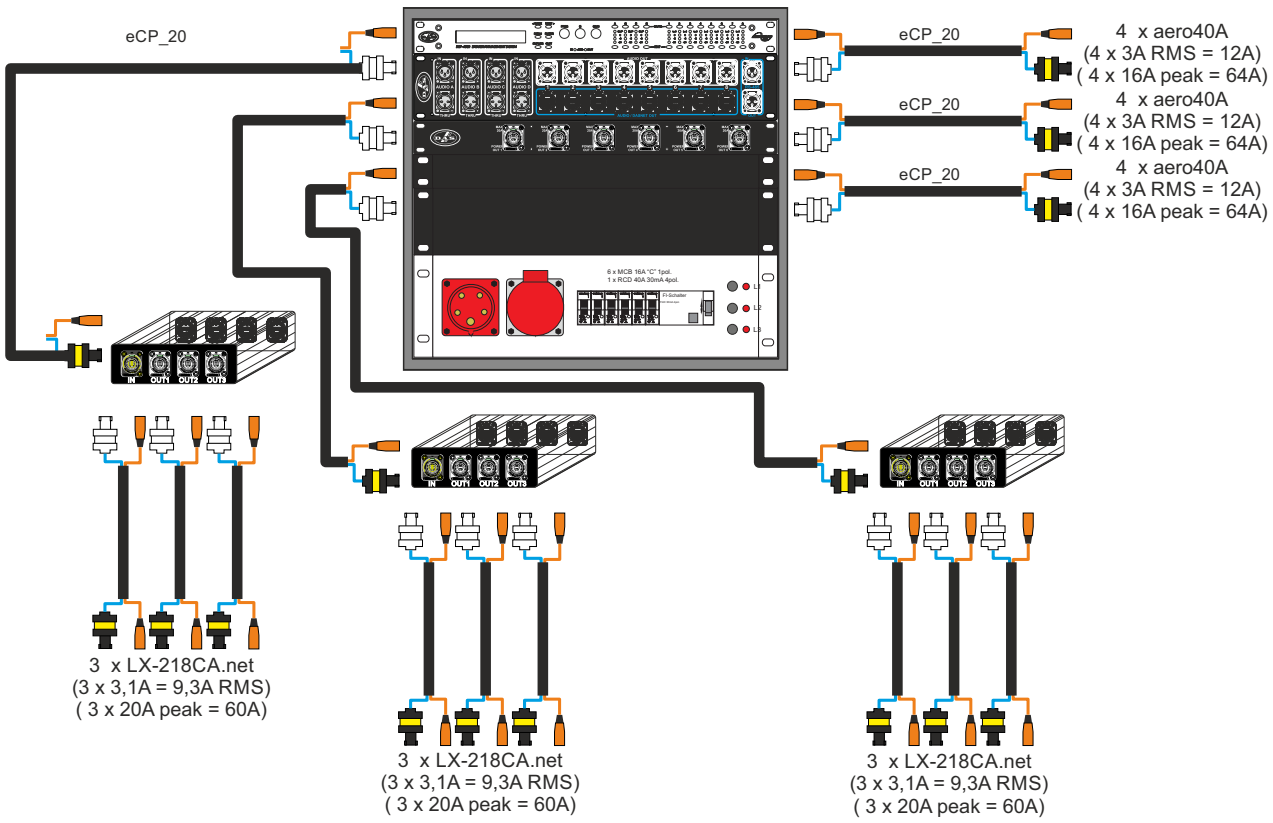
With these values, in one phase we will have:

RMS current: 3 x aero 40A and 2 x LX-218CA.net --> 18A + 12,4A RMS = 30,4A RMS, phase max RMS current is 30A.
Peak current: 3 x aero 40A and 2 x LX-218CA.net --> 48A + 80A peak = 128A Peak, each circuit breaker can stand 10In < I < 20In, that is to say between 200A< I < 400A.

CONFIGURATIONS (cont´d)

Note: You will find more configurations on the web page.

230V DASnet RACK: maximum number of cabinets - 12 aero 40A + 9 LX-218CA.net


eCP_20
eCP_20
4 x aero40A
(4 x 3A RMS = 12A)
(4 x 16A peak = 64A)
eCP_20
4 x aero40A
(4 x 3A RMS = 12A)
(4 x 16A peak = 64A)
eCP_20
4 x aero40A
(4 x 3A RMS = 12A)
(4 x 16A peak = 64A)
3 x LX-218CA.net
(3 x 3,1A = 9,3A RMS)
(3 x 20A peak = 60A)
3 x LX-218CA.net
(3 x 3,1A = 9,3A RMS)
(3 x 20A peak = 60A)
3 x LX-218CA.net
(3 x 3,1A = 9,3A RMS)
(3 x 20A peak = 60A)

With these values, in one phase we will have:

RMS current: 4 x aero 40A and 3 x LX-218CA.net --> 12A + 9,3A RMS = 21,3A RMS, phase max RMS current is 32A.
Peak current: 4 x aero 40A and 3 x LX-218CA.net --> 64A + 60A peak = 124A Peak, each circuit breaker can stand 5In < I < 10In, that is to say between 80A< I < 160A.

SPECIFICATIONS

How many "devices" can be connected to a single *DASnet Splitter*?

The answer to this question will depend on three different factors; first of all model of the system, second the power consumption (RMS and Peak) of it and third the power distro that provides power to the splitter.

Power Consumption:

LX-218CA.net	RMS current (measured at 1/3 of the power)	3,1A	230V
	PEAK current (measured at full power)	20A	230V
	RMS current (measured at 1/3 of the power)	6,2A	115V
	PEAK current (measured at full power)	40A	115V
aero 40A	RMS current (measured at 1/3 of the power)	3A	230V
	PEAK current (measured at full power)	16A	230V
	RMS current (measured at 1/3 of the power)	6A	115V
	PEAK current (measured at full power)	32A	115V

Power Distros (included in DASnet Racks)

230V distro	32A three phase	6 outputs x 16A each RMS current 16A	Breakers type C, 16A Short term current (peak) 5In<I<10In
115V distro	30A three phase	6 outputs x 15A each RMS current 15A	Breakers type D, 20A Short term current (peak) 10In<I<20In

Important considerations

Check the system´s configurations (***aero 20A***, ***aero 40A***) for more information regarding the quantity of cabinets that should be connected to the ***DASnet Splitters***.

Consider, if you are using different power distros than the ones provided by DAS Audio, that the type of breakers and their nominal current (In) is fundamental to define the number of cabinets connected to a single ***DASnet splitter***.

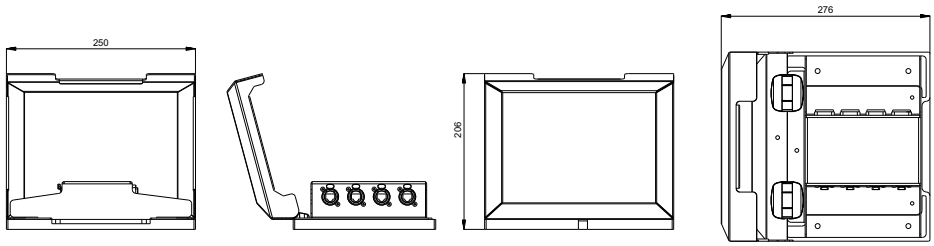
Consider that there is also a current limitation in the PowerCon connectors. 20A is the maximum RMS current for them.

System´s power consumption will depend on the level at which the system is driven: all the given current values are valid when operation with music or in a live sound event and have been measured at maximum system´s level (DSP limiters).

LINE DRAWINGS

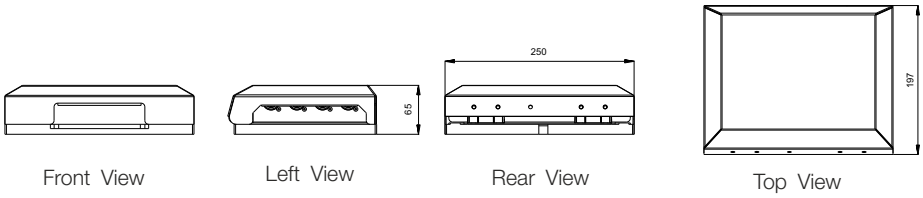
ALL DIMENSIONS IN MILIMETERS

OPENED



ALL DIMENSIONS IN MILIMETERS

CLOSED



APPENDIX I : DASnet cables

With each system, **cabling and patch panels are provided**. It is very important to use the system with the intended cables to prevent electromagnetic interferences between the analog audio signal, the DASnet data and the power. Be sure to check the specifications provided by the cable manufacturer. It is also especially important when installing connectors yourself, to note that when termination is not accurate, a cable will be unable to achieve its maximum performance and could have interferences.

There are 4 different types of cables.

- The main feeds which include power and a STP, CAT7 cable. These cables are named **eCP_xx** (xx refers to cable length).

- The links between cabinets (aero40A/Convert15A/LX-218CAnet), which are STP CAT7 cables. Cable code **eC_09**

- Power Links between cabinets.Cable code **Plink1_09**

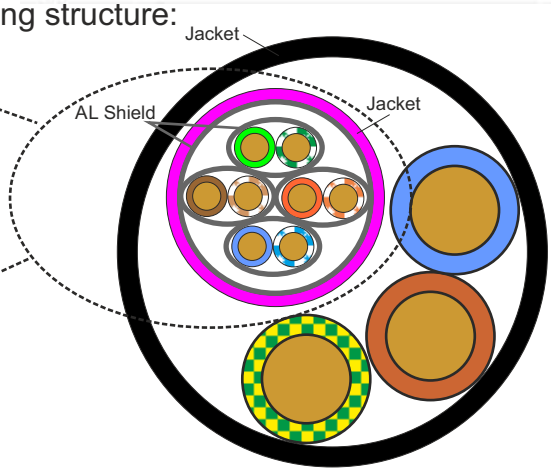
- Links for RoadNet series. Power+STP CAT7. eCPk 1/eCPk 5

Important

The main feed cable eCP_xx has the following structure:

STP CAT 7 cable with Aluminium Shield for each individual pair and a main aluminium Shield.
The main Shield has to be soldered to the etherCon housing.

The eC_09 cable is a CAT5e cable with global Aluminium Shield.



ecP_xx: Power cable 3x2,5mm^2 + CAT7 4x (2 x 0,14mm^2)

The pin out of the EtherCon to XLR is the following on the eCP cables:

	etherCon	XLR
1	Orange-White	Audio+ 2
2	Orange	Audio- 3
3	Green-White	Audio Earth 1
4	Blue	
5	Blue-White	
6	Green	Data Earth 1
7	Brown-White	Data- (A) 3
8	Brown	Data+ (B) 2

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